

7401 Carmel Executive Park Dr Suite 310 Charlotte, NC 28226

To: Town of Matthews Board of Commissioners
Town of Matthews Planning Board
232 Matthews Station Street
Matthews, NC 28105-6713

Board of Commissioners

APPROVED

Lori Canapinno, Town Clerk

Ladies and Gentlemen,

Century Communities is requesting your consideration for the approval of amending conditions within Rezoning Petition 2017-674 (AKA Harmony at Matthews). Please see proposed changes in **Exhibit A, sheets RZ-2 and RZ-7**.

The first requested amendment includes proposing Nellie Steven Holly in lieu of the approved Leland Cypress due to the Duke Energy infrastructure that was installed after the approval of Petition No. 2017-674. See **Exhibit B**, illustrating the existing overhead power.

The proposed Nellie Steven Holly species was suggested by Ralph Ramsaur of Town of Matthews and is an approved species under Duke overhead powerlines. This species is noted for its fullness and screening abilities, meeting the intent of using the Leland Cypress. See **Exhibit C**, listing approved species and maintenance for trees under Duke overhead powerlines.

The second requested amendment includes revising the sentence in **Exhibit A**, **sheet RZ-7**, **note 7B** to be reworded from "The Berm shall terminate at the pedestrian trail" to proposed "The Berm shall extend to the pedestrian walking trail." We believe this note better meets the intent to extend the berm to the path, yet not require it to stop at the pedestrian path.

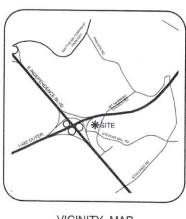
We believe the proposed changes have no negative impact on the community.

Thank you for your consideration.

Christopher Pereira

Land Development Manager, Century Communities

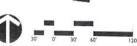




VICINITY MAP

12-15+12-20 to 12-U5





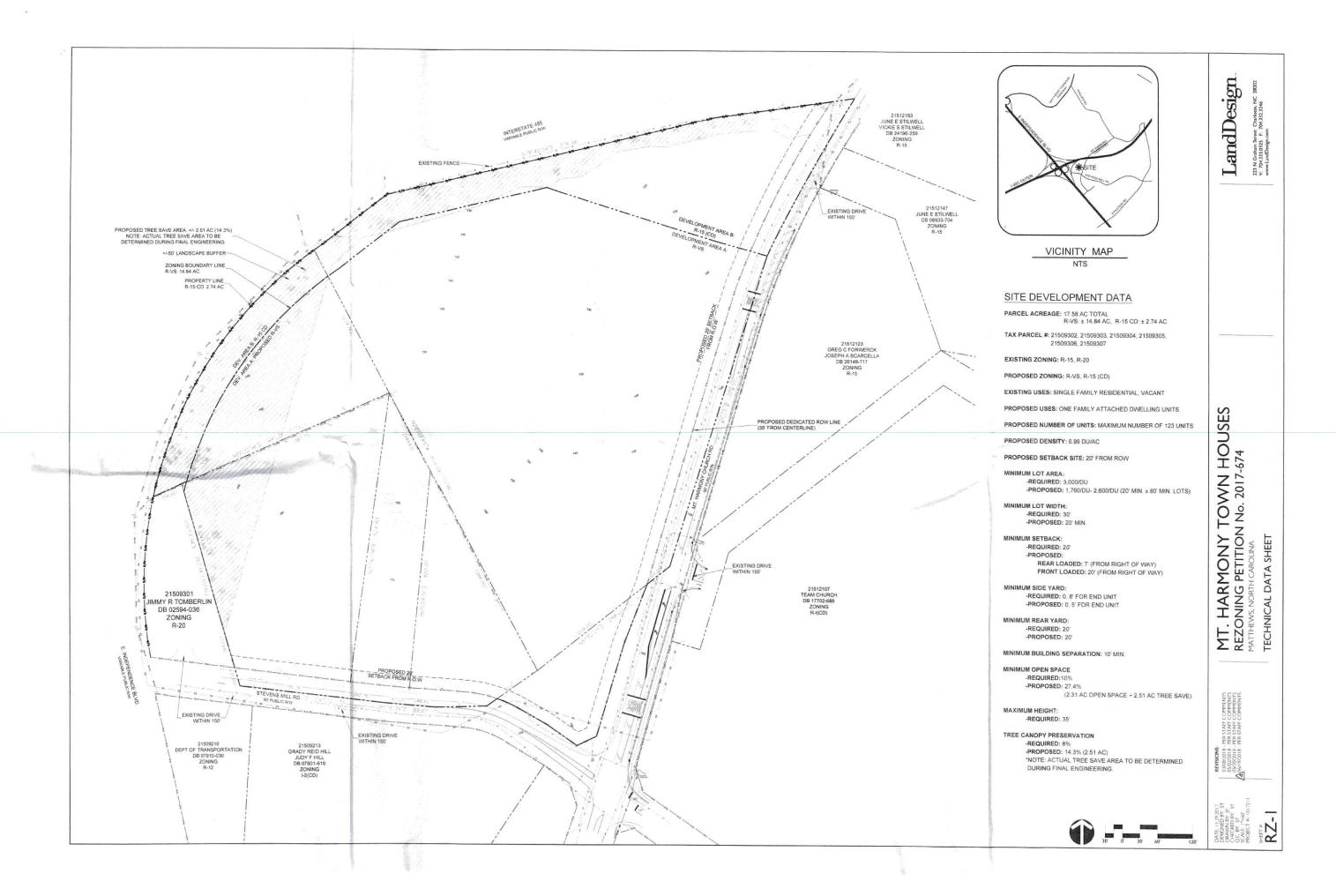
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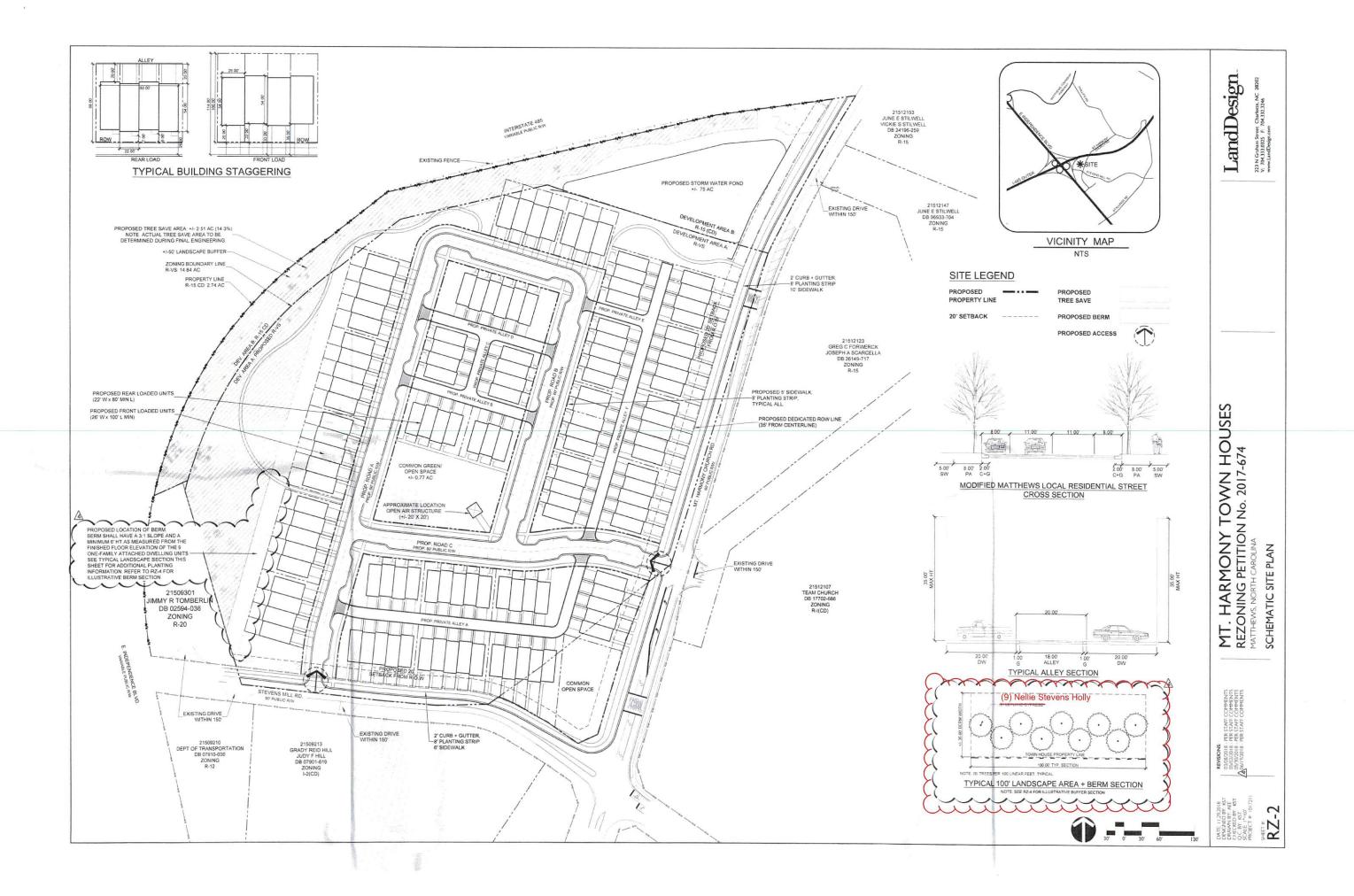
REVISIONS.
03/08/2018 - PER STAFF COMMENTS
08/02/2018 - REK STAFF COMMENTS
08/32/2018 - RER STAFF COMMENTS
A/04/19/2018 - PER STAFF COMMENTS

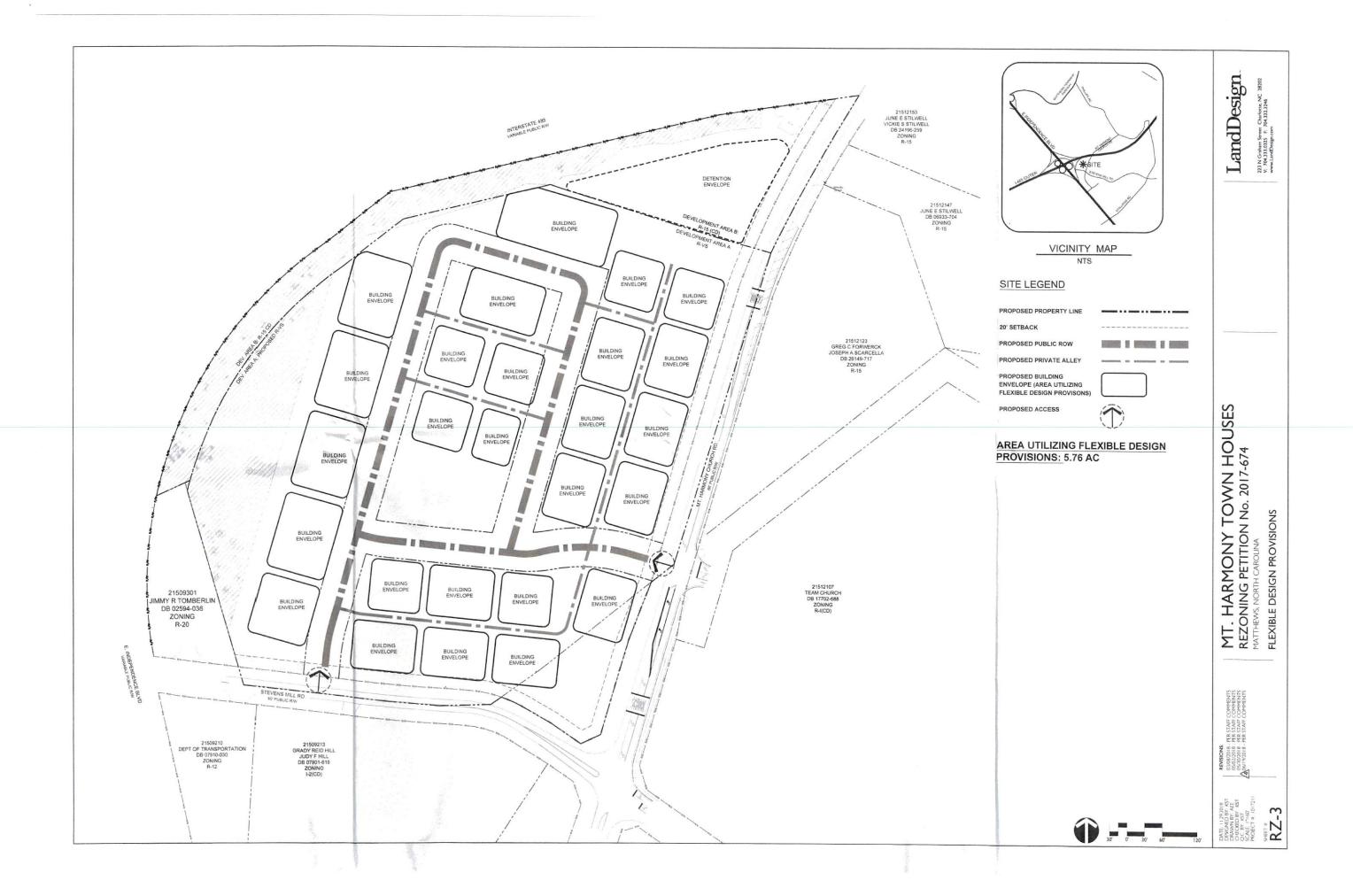
MT. HARMONY TOWN HOUSES REZONING PETITION No. 2017-674 MATTHEWS, NORTH CAROLINA COVER SHEET

LandDesign.

223 N Graham Street Charlotte, NC 2 V: 704.333.0325 F: 704.332.3246 www.LandDestgn.com

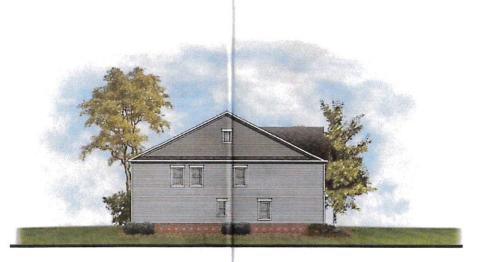








26' Wide Front Load Townhomes 2-Story Brick 5-Plex Rear Elevation



26' Wide Front Load Townhomes 2-Story Brick 5-Plex Left Side Plan 2 Elevation'B'



CENTURY

26' Wide Front Load Townhomes 2-Story Brick 5-Plex Right Side Plan 2 Elevation'C'



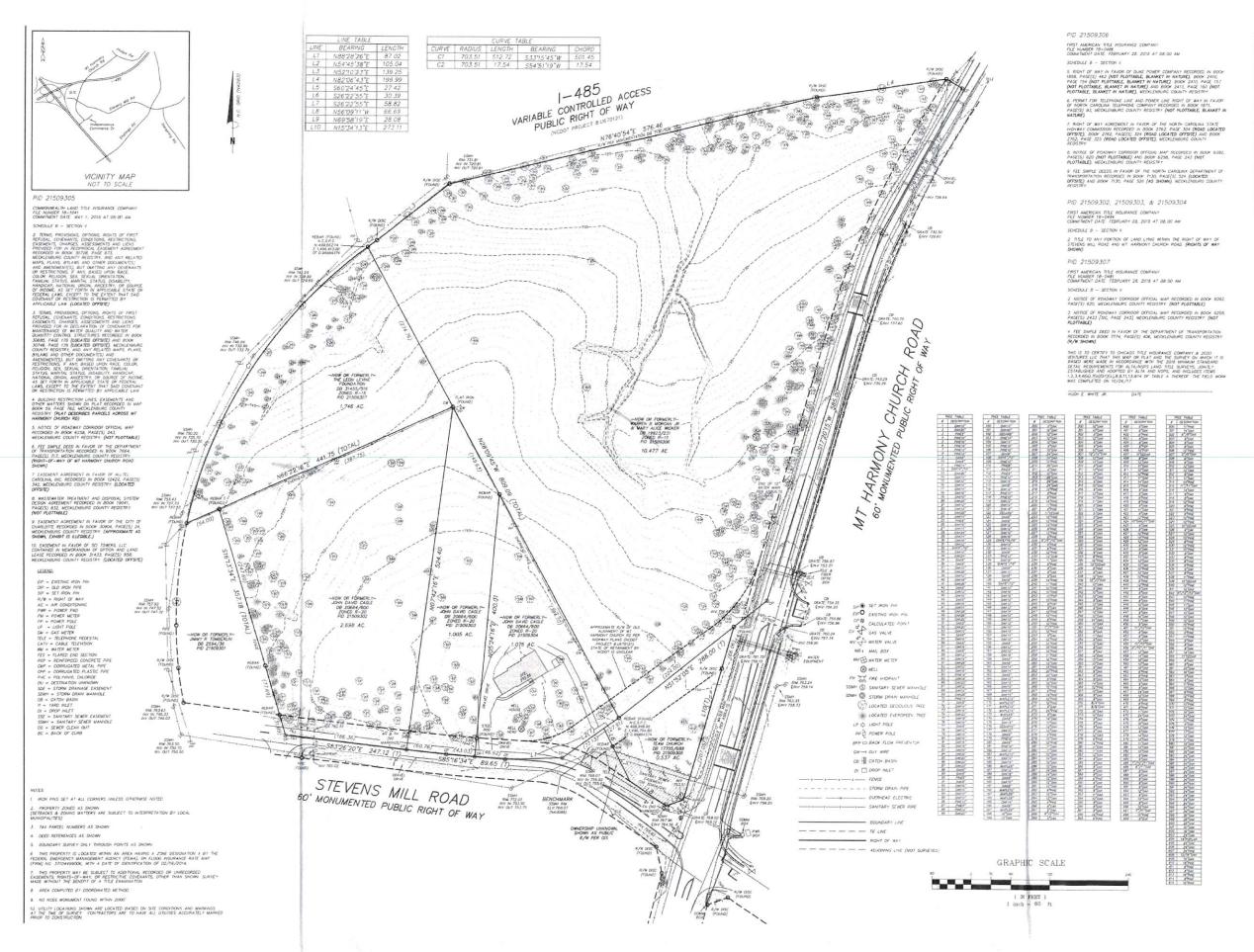
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MT. HARMONY TOWN HOUSES REZONING PETITION No. 2017-674
MATTHEWS, NORTH CAROLINA ARCHITECTURAL ELEVATIONS

LandDesign

CENTURY

CENTURY



MT HARMONY CHURCH ROAD

(NEM PRE WITHSECHON OF STERIES WILL ROAD)

RVEYED FOR: CENTURY STANDINGS SOUTHEAST, LL.

O. 9

## 1. GENERAL PROVISIONS

- A. These Development Standards form a part of the Rezoning Plan associated with the Rezoning Application filed by 2020 Venture These Development Satisfactors and approximately 17.58 acre site located on the northwest quadrant of the intersection of Stevens Mill Road and Mt. Harmony Church Road, which site is more particularly depicted on the Rezoning Plan (hereinafter referred to as the "Site"). The Site is comprised of Tax Parcel Nos. 215-093-02, 215-093-03, 215-093-04, 215-093-05, 215-093-06 and 215-093-07.
- B. For entitlement purposes, the Site is divided into two separate development areas that are designated on the Rezoning Plan as Development Area A and Development Area B.
- C. The development and use of the Site will be governed by the Rezoning Plan, these Development Standards and the applicable
- provisions of the Town of Matthews Unified Development Ordinance (the "Ordinance").

  D. Subject to the flexible design standards set out below in Section 8, the regulations established under the Ordinance for the R-VS oning district shall govern the development and use of that portion of the Site designated as Development Area A on the Rezoning
- E. The regulations established under the Ordinance for the R-15 zoning district shall govern the development and use of that portion of the Site designated as Development Area B on the Rezoning Plan.
- of the Site designated as Development Area B on the Rezoning Plan are schematic in nature and are intended to depict the general arrangement of the uses and improvements on the Site. Accordingly, the ultimate layout, locations and sizes of the development and site elements depicted on the Rezoning Plan are graphic representations of the proposed development and site elements, and, subject to the terms of these Development Standards and the Ordinance, are subject to minor alterations or modifications during the design development and construction document phases.

## 2. PERMITTED USES

 Development Area A
 That portion of the Site designated as Development Area A on the Rezoning Plan may only be devoted to a residential community. containing a maximum of 123 for sale one-family attached dwelling units, and to any incidental or accessory uses relating thereto that are permitted in the R-VS zoning district.

# B. Development Area B

(1) That portion of the Site designated as Development Area B on the Rezoning Plan may only be devoted to tree save areas, common open space areas, landscaped areas, walking trails and storm water facilities that serve and are associated with the residential community to be located on Development Area A.

# 3. DIMENSIONAL STANDARDS

- A. Subject to the flexible design standards set out below in Section 8, the development of Development Area A shall comply with the nal standards of the R-VS zoning district set out in Section 155.604 of the Ordinance and the dimensional standards set out in the Site Data table.
- B. The development of Development Area B shall comply with the applicable dimensional standards of the R-15 zoning district.

## 4 TRANSPORTATION

- A. Vehicular access shall be as generally depicted on the Rezoning Plan. The placement and configuration of the access points are subject to any minor modifications required to accommodate final site and construction plans and designs and to any adjustments required for approval by the Town of Matthews (the "Town") and/or the North Carolina Department of Transportation
- B. As depicted on the Rezoning Plan, the Site will be served by internal public streets and internal private alleys, and minor adjustments to the locations of the internal public streets and the internal private alleys shall be allowed during the construction
- C. Prior to the issuance of the sixty-fifth (65th) certificate of occupancy for a one-family attached dwelling unit constructed on the Site, Applicant shall install a temporary traffic signal at the intersection of Moore Road and Matthews-Mint Hill Road. Notwithstanding the foregoing, Applicant shall not be required to install this temporary traffic signal if it has been installed by others prior to the issuance of the sixty-fifth (65th) certificate of occupancy for a one-family attached dwelling the Site, or if the installation of the temporary traffic signal is not approved by NCDOT or the Town of Matthews
- D. Subject to the approval of the Town and/or NCDOT and prior to the issuance of the first certificate of occupancy for a building to be constructed on the Site, Applicant shall install (by way of striping) a northbound left turniane on Mt. Harmony Church Road at the vehicular access point into the Site from Mt. Harmony Church Road.
- E. Prior to the issuance of the first certificate of occupancy for a building to be constructed on the Site Applicant shall dedicate and convey to the Town or NCDOT (subject to a reservation for any necessary utility easements) those portions of the Site located immediately adjacent to Mt. Harmony Church Road as required to provide right of way measuring 35 feet from the centerline of the existing Mt. Harmony Church Road right of way, to the extent that such right of way does not already exist. The portion of the Site to be dedicated as right of way is generally depicted on the Rezoning Plan.
- F. A public access easement shall be provided over the private alleys located on the Site to the Town so that the Town can provide rash service and other public services to the residents of this residential comm
- G. Subject to the approval of NCDOT, the Town of Matthews and any other governmental agencies, Applicant shall install a Subject to the approval of NCD01, the Town of Matthews and any other government a generics, Applicant shall mistall a pedestrian refuge island within Mt. Harmony Church Road in close proximity to the Site. The exact location of the pedestrian refuge island shall be determined during the permitting process. In the event that Applicant cannot obtain all approvals and permits required to install the pedestrian refuge island, then Applicant shall have no obligation to install the pedestrian refuge island. Permits for the development of the Site or the construction of the buildings to be located or the Site and certificates of occupancy for such buildings shall not be withheld or delayed in the event that Applicant cannot obtain all approvals and permits required to install the pedestrian refuge island, or in the event that Applicant is waiting to receive the required approvals or the denial of such approvals for the pedestrian refuge island after having applied for such approvals. Applicant shall not be required to undertake any widening of Mt. Harmony Church Road to accommodate a pedestrian refuge island.

# 5 STREETSCAPE TREATMENT

- A. A minimum 8 foot wide planting strip and a minimum 10 foot wide multi-use path shall be installed along the Site's frontage on Mt. Harmony Church Road as generally depicted on the Rezoning Plan. In the event that themulti-use path (or portions thereof) is not located within public right of way, then the multi-use path (or portions thereof) shall be located in a public sidewalk utility.
- B. A minimum 8 foot wide planting strip and a minimum 6 foot wide sidewalk shall be installed along the Site's frontage on Steven Mill Road as generally depicted on the Rezoning Plan. In the event that the sidewalk (or portions thereof) is not located within public right of way, then the sidewalk (or portions thereof) shall be located in a public sidewalk utility easement

## 6. ARCHITECTURAL STANDARDS

- Attached to the Rezoning Plan are conceptual, schematic images of the front, side and rear elevations of the rear loaded one-family attached dwelling units to be constructed on the Site that are intended to depict the general conceptual architectural style, design treatment and character of the front, side and rear elevations of the rear loaded one-family attached dwelling units to be constructed on the Site. Accordingly, the front, side and rear elevations of each rear loaded one-family attached dwelling unit to be constructed on the Site. on the Site shall be designed and constructed so that the front, side and rear elevations are substantially similar in appearance to one of the attached conceptual, schematic images. Notwithstanding the foregoing, changes and afterations to the front, side and rear elevations of the rear loaded one-family attached dwelling units to be constructed on the Site that do not materially change the overall conceptual architectural style, design treatment and character shall be permitted.
- B. Attached to the Rezoning Plan are conceptual, schematic images of the front, side and rear elevations of the front loaded one-family attached dwelling units to be constructed on the Site that are intended to depict the general conceptual architectural style, design treatment and character of the front, side and rear elevations of the front loaded one-family attached dwelling units to be constructed on the Site. Accordingly, the front, side and rear elevations of each front loaded one-family attached dwelling unit to be constructed on the Site shall be designed and constructed so that the front, side and rear elevations are substantially similar in appearance to one of the attached conceptual, schematic images. Notwithstanding the foregoing, changes and alterations to the front, side and rear elevations of the front loaded one-family attached dwelling units to be constructed on the Site that do no materially change the overall conceptual architectural style, design treatment and character shall be permitted.
- Applicant may subsequently propose additional conceptual, schematic images of the front, side and rear elevations of the one-family attached dwelling units to be constructed on the Site, and such additional conceptual, schematic images must be approved by the Matthews Board of Commissioners prior to the issuance of a building permit for a one-family attached dwelling unit that utilizes one of the additional conceptual, schematic images of the front elevation, side and rear elevations.
- D. The primary exterior building materials for the one-family attached dwelling units to be constructed on the Site shall be brick, stone
- E. Vinyl, EIFS or masonite may not be used as an exterior building material on the one-family attached dwelling units to be constructed on the Site. Notwithstanding the foregoing, vinyl may be utilized on windows, doors, garage doors, soffits, trim and
- F. Each one-family attached dwelling unit in a building shall have its own exterior color palette, so that two or more one-family attached dwelling units in a building shall not have the same exterior color palette. Notwithstanding the foregoing, one-family attached dwellings units located in separate buildings may utilize the same exterior color palette.
- G. The rear elevation of each one-family attached dwelling unit shall have the same color palette as the front elevation of such one-family attached dwelling unit, and the rear elevation of each one-family attached dwelling unit shall contain the same type of cementitious siding (e.g., shake siding, board and batten siding, horizontal siding) as the front elevation such one-family attached
- H. Except as provided below in paragraph I, the one-family attached dwelling units to be constructed on the Site shall be rear loaded
- Notwithstanding paragraph H above, a maximum of 31 of the one-family attached dwelling units to be constructed on the Site may be front loaded units, and the locations of such front loaded units are generally depicted on Sheet RZ-2 of the Rezoning Plan.
- J. The maximum height of the buildings to be constructed on the Site shall be 35 feet as measured under the Ordinance
- K. Each rear loaded one-family attached dwelling unit that fronts and is adjacent to Mt. Harmony Church Road shall have a step with a minimum height of 18 inches from the immediately adjacent sidewalk or walkway to the front stoop located at the front entry door into such rear loaded one-family attached dwelling unit.
- L. Each rear loaded one-family attached dwelling unit located on the Site that does not front and is not adjacent to Mt. Harmony Church Road shall have a step with a minimum height of 12 inches from the immediately adjacent sidewalk or walkway to the front stoop located at the front entry door into such rear loaded one-family attached dwelling unit.
- M. Each rear loaded one-family attached dwelling unit constructed on the Site shall have a covered front porch with a minimum depth
- N. The front facade of each one-family attached dwelling unit constructed on the Site shall be setback a minimum of 2 feet from the front facadc(s) of the adjacent one-family attached dwelling unit(s), or located a minimum of 2 feet in front of the front facadc(s) of the adjacent one-family attached dwelling unit(s). The rear facade of each one-family attached dwelling unit (s). The rear facade of Site shall be setback a minimum of 2 feet from the rear facade(s) of the adjacent one-family attached dwelling unit(s), are located a minimum of 2 feet in front of the rear facade(s) of the adjacent one-family attached dwelling unit(s). The purpose of this requirement is to break up the facades and rooflines of the buildings containing the one-family attached dwelling units. A typical detail depicting these conditions is set out on the Rezoning Plan
- O. The garage door on each front loaded one-family attached dwelling unit shall be a carriage style garage door and the garage door
- P. Each one-family attached dwelling unit constructed on the Site shall have a two car garage and a driveway with a minimum denth
  - The HVAC unit for each one-family attached dwelling unit shall be located at the rear of the one-family attached dwelling unit.

# $\triangle$ BERM/HAWK CERTIFICATION

- Prior to the issuance of the first certificate of occupancy for a building to be constructed on the Site, Applicant shall install a bern between the 9 one-family attached dwelling units located at the southwestern corner of the Site and a portion of the we boundary line of the Site as generally depicted on Sheet RZ-2 of the Rezoning Plan (the "Berm").
- The Berm shall commence near the southwestern corner of the Site and run in a generally northeasterly direction so that it is located to the rear of and generally parallel to the 9 one-family attached dwelling units located at the southwestern corner of the focated to the rear of and generally paratic to the 2 one-name and the form shall terminate at the pedestrian walking trail.

  The Berm shall extend to the pedestrian walking trail.

  Walking trail.
- The Berm shall have a 3 to 1 slope and a minimum height of 6 feet as measured from the finished floor elevation of the one-family attached dwelling units located near the Berm and at the southwestern corner of the Site

Nellie Stevens Holly
Levland-express trees shall be installed on top of the Berm at the rate of 9 trees per 100 feet as depicted on the Typical 100. cape Area and Berm Section set out on Sheet RZ-2 of the Rezoning Plan.

The Berm shall be maintained by the property owners association for the residential community

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Subject to paragraph G below, Applicant shall preserve trees located between the Berm and the western boundary line of the Site

otwithstanding the terms of paragraph F above, Applicant shall remove 3 trees located near or on the western boundary line of the Site and trim limbs from 1 tree located near or on the western boundary line of the Site. These 4 trees shall be identified by Applicant and the owner/occupants of Tax Parcel No. 215-093-01.

Applicant shall obtain Habitat and Wildlife Keepers (HAWK) - National Wildlife Federation Certification for those portions of the Site located within the tree save and open space area

# 8. FLEXIBILE DESIGN STANDARDS

Pursuant to Sections 155.503.1.14 and 155.401.7 of the Ordinance, the following flexible design standards shall apply to the development of the Site and shall be deemed to be approved in the event that the Rezoning Application is approved by the

1,760 square feet per dwelling unit.

(2) Minimum Lot Width:

(3) Minimum Setback: Rear loaded units - 7 feet from the right of way

Front loaded units - 20 feet from the right of way

(4) Minimum Side Yard: 0. 5 feet for end unit

(5) Minimum Building Separation: 10 feet

B. The portion of the Site utilizing flexible design standards contains approximately 5.76 acres as generally depicted on Sheet RZ-3 of the Rezoning Plan.

## 9. SIGNS

A. All signs installed on the Site shall comply with the requirements of the Ordinance.

A. Outdoor lighting fixtures installed on the Site shall comply with the requirements of the Outdoor Illumination provisions of the

# 11. COMMON OPEN SPACE

- A. Common open space areas shall be provided on the Site as generally depicted on Sheet RZ-2 of the Rezoning Plan.
- B. The common open space areas may contain, among other things, benches and other seating elements, picnic tables, lighting, structures such as gazebos and shelters, landscaping and hardscape.
- C. A minimum 400 square foot covered open air structure shall be constructed within the approximately .77 acre common open space/amenity to be located in the center of the Site as generally depicted on the Rezoning Plan.
- D. Outdoor cooking grills shall be located within the approximately .77 acre common open space/amenity to be located in the center
- E. Walking trails shall be installed on the Site as generally depicted on the Rezoning Plan

# 12. BINDING EFFECT OF THE REZONING APPLICATION

If this Rezoning Application is approved, all conditions applicable to the development and/or use of the Site imposed under this Rezoning Plan will, unless amended in the manner provided under the Ordinance, be binding upon and inure to the benefit of Applicant and the current and subsequent owners of the Site and their respective successors in interest and assigns. Throughout these Development Standards, the terms, "Applicant" and "owner" or "owners" shall be deemed to include the heirs, devisees, personal representatives, successors in interest and assigns of Applicant or the owner or owners of the Site from time to time who may be involved in any future development thereof.

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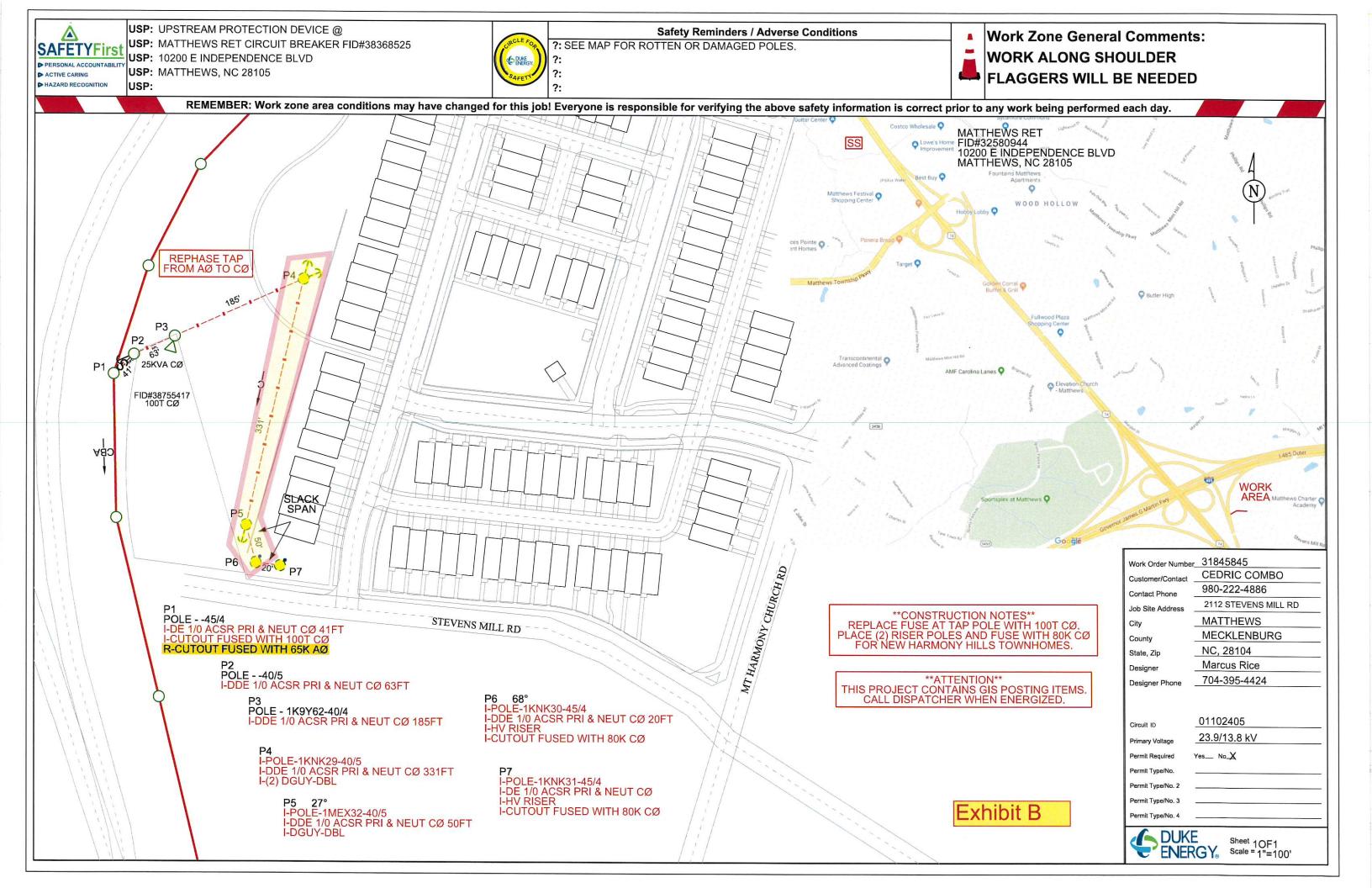
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MT. HARI REZONING I MATTHEWS, NORTH

DEVELOPMENT STANDARDS

PER PER



# Exhibit C - Approved Species\_Duke

# IV. APPROVED PLANT SPECIES

The following list of trees and shrubs represent the approved plant species that may be used to comply with code sections 12.302 and 12.303 of the City of Charlotte Zoning Ordinance and Chapter 21 ("Tree Ordinance") of the City of Charlotte Code.

# Other species may be allowed with staff approval

List subject to change

- \* Not allowed for required city planting.
- \*\*- Not reccomended for required city planting.
- † Cultivars under 15' tall only.
- ‡- Trees <25' mature height can be planted directly under power lines.

Trees 25'- 40' mature height can be planted at least 20' from power lines.

Proposed Species on Sheet 4 of this exhibit

| City Tree Ordinance Approved   |
|--|
| CIP/ROW Approved   |
| City Zoning Approved (Large or Small Maturing)                                     |
| Duke Transmission Zone( <b>T</b> )<br>or Distribution line( <b>D</b> )<br>Approved |
|  |
| Shade Tolerant   |
| Tolerates Poor Drainage  |
| Native   |
| Blooming   |
| Foliage (Deciduous, Semideciduous, or Evergreen)                                   |

# **Trees**

|                           |                        |   |   | - 0 | - 0 4 |   |          |   | Land American | Р |
|---------------------------|------------------------|---|---|-----|-------|---|----------|---|---------------|---|
| Common Name               | Scientific Name        |   |   |     |       |   |          |   |               |   |
| LARGE MATURING (50'+ H)   |                        |   |   |     |       |   |          |   |               |   |
| Arborvitae, 'Green Giant' | Thuja 'Green Giant'    |   | X |     |       |   | X        |   |               | Ε |
| Ash, Green                | Fraxinus pennsylvanica |   |   | L   |       | X |          | х |               | D |
| Ash, White                | Fraxinus americana     | х |   | L   |       |   | Land of  | х |               | D |
| Baldcypress               | Taxodium distichum     | x | × | L   |       |   | X        | х |               | D |
| Beech, American           | Fagus grandiflora      | x | X | L   |       |   | 6,886    | Х |               | D |
| Birch, River              | Betula nigra           | x | x | L   |       | х | X        | х |               | D |
| Black Gum                 | Nyssa sylvatica        | х | × | L   |       |   | Marine . | х |               | D |
| Cedar, Deodar             | Cedrus deodara         | х | X | L   |       |   |          |   |               | Е |
| Cedar, Eastern Red        | Juniperus virginiana   |   | X | L   |       |   |          | х | 200           | Е |
| Cryptomeria, Japanese     | Cryptomeria japonica   | x | х |     |       |   | X        |   |               | Е |

| Trees  Common Name  Scientific Name  LARGE MATURING (50'+ H) cont |  |     |   | City Zoning Approved (Large or Small Maturing) | Duke Transmission Zone(T) or Distribution line(D) Approved | Shade Tolerant | Tolerates Poor Drainage | Native | Blooming | Foliage (Deciduous, Semideciduous, or Evergreen) |
|---|--|-----|---|--|--|----------------|-------------------------|--------|----------|--|
|   |  |     |   |  |  |                |                         |        |          |  |
| Dawn Redwood  | Metasequoia glyptostroboides               | х   | Х |  |  |                |                         |        |          | S  |
| Elm, Princeton  | Ulmus americana 'Princeton'                |     | X |  |  |                |                         |        |          | D  |
| Elm, Lacebark   | Ulmus parvifolia                           | х   | Х | L  |  | Х              | X                       | 1      |          | D  |
| Gingko ‡  | Gingko biloba                              | х   | X | L  |  | х              | X                       |        |          | D  |
| Hackberry, Common   | Celtis occidentalis                        | х   |   | L  |  | х              | ×                       | х      |          | D  |
| Hackberry, Sugar  | Celtis laevigata                           | Х   |   | 22   |  | x              | ×                       | Х      |          | D  |
| Hemlock, Eastern  | Tsuga canadensis                           |     |   | L  |  | X              |                         | Х      |          | E  |
| Hickory, Bitternut  | Carya cordiformis                          |     |   | L  |  |                |                         | х      |          | D  |
| Hickory, Pignut   | Carya glabra                               | 711 |   | L  |  |                |                         | х      |          | Е  |
| Hickory, Shagbark   | Carya ovata                                |     |   | L  |  |                |                         | х      |          | Е  |
| Holly, American   | Ilex opaca                                 | х   | X | S  |  | х              |                         | х      |          | Е  |
| Honeylocust, Shademaster**  | Gleditsia tricanthos inermis 'Shademaster' |     |   | 4  |  |                |                         | х      |          | D  |
| Hornbeam, European  | Carpinus betulus                           | х   | X | S  |  | x              | ×                       |        |          | D  |
| Kentucky Coffeetree   | Gymnocladus dioicus                        | x   | х |  |  | X              |                         | х      |          | D  |
| Linden, Little Leaf   | Tilia cordata                              | x   |   |  |  | X              | ×                       |        | X        | D  |
| Magnolia, Cucumber  | Magnolia acuminata                         |     | х |  |  |                |                         | x      | X        | D  |
| Magnolia, Southern  | Magnolia grandiflora                       | x   | Х | L  |  |                | X                       | X      | X        | E  |
| Maple, Freeman  | Acer x fremanii                            | X   | х |  |  | ×              |                         | X      | X        | D  |
| Maple, Red *  | Acer rubrum                                |     | X | L  |  | X              | ×                       | X      |          | D  |
| Maple, Sugar  | Acer saccharum                             | ×   | Х | L  |  | X              |                         | ×      |          | D  |
| Oak, Black  | Quercus velutina                           |     |   | L  |  | X              |                         | x      |          | D  |
| Oak, Fastigiante English  | Quercus robur 'Fastigiata'                 |     | X |  |  |                |                         |        |          | D  |

| Trees                |  | City Tree Ordinance Approved | CIP/ROW Approved | City Zoning Approved (Large or Small Maturing) | Duke Transmission Zone(T)<br>or Distribution line(D)<br>Approved | Shade Tolerant | Tolerates Poor Drainage | Native | Blooming | Foliage (Deciduous, Semideciduous, or Evergreen) |
|----------------------|--|------------------------------|------------------|--|--|----------------|-------------------------|--------|----------|--|
| Common Name          | Scientific Name                              |                              |                  |  |  |                |                         |        |          |  |
|                      | ATURING (50'+ H) cont                        |                              |                  |  |  |                |                         |        |          |  |
| Oak, Laurel          | Quercus laurifolia                           | х                            |                  | L  |  | х              |                         | х      |          | D  |
| Oak, Live            | Quercus virginiana                           | х                            | Х                | L  |  | х              | x                       | х      |          | E  |
| Oak, Northern Red*   | Quercus rubra                                |                              |                  | L  |  | X              |                         | х      |          | D  |
| Oak, Nuttall         | Quercus nuttalii                             | х                            | X                |  |  | X              |                         | х      |          | D  |
| Oak, Overcup         | Quercus lyrata                               | х                            | X                |  |  | X              | X                       | х      |          | D  |
| Oak, Scarlet**       | Quercus coccinea                             |                              |                  | L  |  |                |                         | х      |          | D  |
| Oak, Shumard         | Quercus shumardii                            | х                            | Х                | L  |  | X              |                         | х      |          | D  |
| Oak, Southern Red    | Quercus falcata                              | х                            | X                | L  |  | X              |                         | х      |          | D  |
| Oak, Swamp White     | Quercus bicolor                              |                              | х                | L  |  | X              | X                       | х      |          | D  |
| Oak, Water           | Quercus nigra                                |                              | X                | L  |  |                | X                       | х      |          | D  |
| Oak, White           | Quercus alba                                 |                              | X                | L  |  | X              |                         | х      |          | D  |
| Oak, Willow          | Quercus phellos                              | х                            | X                | L  |  | X              | X                       | х      |          | D  |
| Pecan                | Carya illinoensis                            |                              |                  | L  |  |                |                         | х      |          | D  |
| Persimmon            | Diospyros virginiana                         |                              |                  | L  |  | x              |                         | х      |          | D  |
| Pine, Austrian       | Pinus nigra                                  | х                            |                  | L  |  |                | X                       |        |          | Е  |
| Pine, Japanese Black | Pinus thunbergi                              |                              |                  | L  |  |                |                         |        |          | E  |
| Pine, Loblolly       | Pinus taeda                                  | х                            | X                | L  |  |                | ×                       | х      |          | E  |
| Pine, Shortleaf      | Pinus echinata                               |                              | Х                | L  |  |                |                         | х      |          | Е  |
| Pine, Virginia       | Pinus virginiana                             | х                            | X                | L  |  |                |                         | х      |          | Е  |
| Poplar, Tulip        | Liriodendron tulipfera                       | х                            | X                | L  |  | ×              | ×                       | х      | Х        | D  |
| Sweetgum, Fruitless  | Liquidambar styraciflua 'Rotundiloba'        | х                            | X                | L  |  | x              | x                       | х      |          | D  |
| Sweetgum, Slender    | Liquidambar styraciflua 'Slender Silhouette' |                              | X                |  |  | ×              | ×                       | х      |          | D  |
| Zelkova, Japanese *  | Zelkova serrata                              |                              |                  | L  | (A) (C) (C) (C) (C) (C) (C) (C) (C) (C) (C                       | X              |                         |        |          | D  |

| Trees<br>Common Name            | Scientific Name                 | City Tree Ordinance Approved | CIP/ROW Approved | City Zoning Approved (Large or Small Maturing) | Duke Transmission Zone(T) or Distribution line(D) Approved | Shade Tolerant | Tolerates Poor Drainage | Native | Blooming | Foliage (Deciduous, Semi- |
|---------------------------------|---------------------------------|------------------------------|------------------|--|--|----------------|-------------------------|--------|----------|---------------------------|
|                                 | MATURING (30'-50'H)             |                              |                  |  |  |                |                         |        |          |                           |
| Arborvitae, American †          | Thuja occidentalis              |                              | V                |  | D  |                |                         |        |          | l -                       |
| Carolina Silverbell             | Halesia carolina                | X                            | X                | S  | U  |                | Х                       | X      |          | E<br>D                    |
| Chinese Pistache                | Pistacia chinensis              | X                            | X                | 3  |  | X              | X                       | Х      | X        | D                         |
| Crape Myrtle (Biloxi, Natchez)* | Lagerstroemia                   | ^                            | X                |  |  |                | X                       |        |          | D                         |
| Dogwood, Flowering ‡            | Cornus florida                  | X                            | X                | S  | D  | ×              |                         | x      | X        | D                         |
| Dogwood, Kousa ‡-               | Cornus kousa                    | X                            | X                | S  | D  | X              |                         | ×      | X        | D                         |
| Fringetree, Chinese             | Chionanthus retusus             | x                            |                  |  |  | X              |                         |        | X        |                           |
| Golden Raintree                 | Koelreuteria paniculata         |                              | X                | S  |  |                |                         |        | X        |                           |
| Hawthorne, Green                | Crataegus viridis 'Winter King' | ×                            | Х                |  |  |                | х                       | x      | X        |                           |
| Holly, 'Emily Brunner'          | Ilex X 'Emily Brunner'          | LY TOWNER                    | X                |  |  | ×              |                         |        |          | E                         |
| Holly, 'Nellie R. Stevens'      | Ilex X 'Nellie R. Stevens'      |                              | X                |  |  | ×              |                         |        |          | E                         |
| Holly, Savannah                 | Ilex X attenuata 'Savannah'     |                              | X                | S  |  |                | ×                       | х      |          | E                         |
| Hornbeam, American              | Carpinus caroliniana            | x                            | х                | S  |  | ×              | X                       | х      |          |                           |
| Maple, Hedge                    | Acer campestre                  |                              | X                | S  |  |                | X                       |        |          | 0                         |
| Maple, Paperbark                | Acer griseum                    |                              | х                |  |  | N.             |                         |        |          |                           |
| Maple, Trident                  | Acer buergeranum                | X                            | Х                |  |  | х              |                         |        |          | 0                         |
| Redbud, Chinese ‡               | Cercis chinensis                | x                            | X                |  | D  | х              |                         |        | Х        |                           |
| Sourwood                        | Oxydendrum arboreum             |                              |                  | S  |  | X              |                         | x      | х        |                           |

| Trees                           |                                    | City Tree Ordinance Approved | CIP/ROW Approved | City Zoning Approved (Large<br>or Small Maturing) | Duke Transmission Zone(T)<br>or Distribution line( <b>D</b> )<br>Approved | Shade Tolerant  | Tolerates Poor Drainage | Native | Blooming | Foliage (Deciduous, Semi-<br>deciduous, or Evergreen) |
|---------------------------------|------------------------------------|------------------------------|------------------|---|---|---|-------------------------|--------|----------|---|
| Common Name                     | Scientific Name                    |                              |                  |   |   |   |                         |        |          |   |
| SMALL                           | MATURING (UP-25'H)                 |                              |                  |   |   |   |                         |        |          |   |
| Arborvitae, Emerald Green       | Thuja occidentalis 'Emerald Green' |                              | X                |   |   |   |                         |        |          | Е   |
| Buckeye, Bottlebrush †          | Aesculus parviflora                | х                            | X                |   | T   | х   |                         | х      | X        | D   |
| Camellia, Sasanuqa              | Camellia sasanqua                  |                              | X                | S   |   | х   |                         |        | ×        | Е   |
| Cherry, Kwanzan                 | Prunus serrulata 'Kwanzan'         | x                            |                  | S   |   |   |                         |        | ×        | D   |
| Cherry, Snowgoose               | Prunus serrulata 'Snowgoose'       |                              | Х                | la l          |   |   |                         |        | x        | D   |
| Cherry, 'Okame'                 | Prunus X 'Okame'                   | Х                            | Х                |   |   |   |                         |        | x        | D   |
| Cherry, Weeping                 | Prunus subhirtella pendula         |                              |                  | S   |   |   |                         |        | ×        | D   |
| Cherry, Yoshino                 | Prunus X yedoensis                 | x                            | X                | S   | D   | De la companya de la |                         |        | ×        | D   |
| Cherrylaurel, Carolina          | Prunus caroliniana                 |                              |                  | S   |   | x   | X                       | х      | ×        | E   |
| Crabapple, Japanese Flowering † | Malus floribunda                   |                              | X                | S   | D   |   |                         |        | X        | D   |
| Crape Myrtle                    | Lagerstroemia                      |                              | X                |   |   |   |                         |        |          | D   |
| Dogwood, redtwig †              | Cornus sericea f. baileyi          |                              | х                |   | D   |   | X                       | х      | ×        | D   |
| Dogwood, Rutger's Hybrid        | Cornus kousa X florida             |                              | X                |   | D   | х   | ×                       |        | X        | D   |
| Filbert, American               | Corylus americana                  | х                            | х                |   | T,D   | x   |                         | х      |          | D   |
| Fringetree                      | Chionanthus virginiana             | 16. 24.                      | X                |   |   |   | X                       | х      | X        | D   |
| Hawthorne, Washington           | Crataegus phaenopyrum              | х                            | X                | S   |   |   | ×                       | х      | X        | D   |
| Holly, Foster                   | Ilex X attenuata 'Fosteri'         | х                            | Х                | S   |   |   | X                       | х      |          | Е   |
| Holly, Yaupon                   | Ilex vomitoria                     |                              | х                | S   |   | ×   |                         | х      |          | E   |
| Magnolia, Star †                | Magnolia stellata                  | X                            | X                | S   | D   |   | X                       | Х      | ×        | D   |

| Trees                     |                                   | City Tree Ordinance Approved | CIP/ROW Approved | City Zoning Approved (Large or Small Maturing) | Duke Transmission Zone( <b>T</b> )<br>or Distribution line( <b>D</b> )<br>Approved | Shade Tolerant | Tolerates Poor Drainage | Native | Blooming | Foliage (Deciduous, Semideciduous, or Evergreen) |
|---------------------------|-----------------------------------|------------------------------|------------------|--|--|----------------|-------------------------|--------|----------|--|
| Common Name               | Scientific Name                   |                              |                  |  |  |                |                         |        |          |  |
| SMALI                     | MATURING (UP-25'H)                |                              |                  |  |  |                |                         |        |          |  |
| Magnilia, Lily Flowered   | Magnolia liliiflora               |                              | х                |  |  | Х              |                         |        | Х        | D  |
| Magnolia, 'Little Gem'    | Magnolia grandiflora 'Little Gem' | x                            | X                |  |  |                | X                       | х      | X        | E  |
| Magnolia, 'Merrill'       | Magnolia X loebneri 'Merrill'     |                              | X                |  |  |                | ×                       | х      | X        | D  |
| Magnolia, Saucer          | Magnolia X soulangiana            | х                            | Х                | S  | D  |                | X                       | Х      | X        | D  |
| Maple, Armur 'Flame' †    | Acer tataricum ginnala 'Flame'    | х                            | X                |  | D  |                | X                       |        |          | D  |
| Maple, Japanese           | Acer palmatum                     | х                            | X                |  |  | Х              |                         |        |          | D  |
| Maple, Purplebow/Shantung | Acer truncatum                    |                              | Х                |  |  |                |                         |        |          | D  |
| Plum, Purpleleaf          | Prunus cerasifera 'Atropurpurea'  | х                            | X                | S  |  |                | (All year)              |        | х        | D  |
| Redbud, Eastern           | Cercis canadensis                 | Х                            | X                | S  | D  | х              | X                       | Х      | X        | D  |
| Serviceberry              | Amelanchier arborea               | X                            | Х                |  |  |                |                         | х      | Х        | D  |
| Serviceberry, Shadbush †  | Amelanchier canadensis            | Х                            | X                | S  | T  | х              |                         | Х      | X        | D  |
| Waxmyrtle                 | Myrica cerifera                   | X                            |                  | S  |  |                | X                       |        |          | E  |

# **SHRUBS**

| <b>Common Name</b>      | Scientific Name                 |
|-------------------------|---------------------------------|
| Burford holly *         | Ilex cornuta burfordi           |
| Camellia *              | Camellia japonica               |
| Convex Japanese holly * | Ilex crenata `convexa'          |
| Dwarf burford holly *   | Ilex cornuta burfordi nana      |
| Emily brunner holly *   | Ilex "Emily Brunner"            |
| English holly *         | llex aquifolium                 |
| Evergreen euonymus *    | Euonymus japonicus              |
| Flowering quince        | Chaenomeles speciosa            |
| Forsythia               | Forsythia intermedia            |
| Glenn dale azalea *     | Azalea hybrida                  |
| Glossy abelia *         | Abelia grandiflora              |
| Hetzi Japanese holly *  | llex crenata `hetzi'            |
| Hetzi jumper *          | Jumperus chinesis hetzi         |
| Indian azalea *         | Azalea indica                   |
| Inkberry holly *        | Ilex glabra                     |
| Japanese aucuba *       | Aucuba japonica                 |
| Kaempferi azalea *      | Azalea obtusum Kaempferi        |
| Laurel *                | Laurus nobilis                  |
| Loropetalum *           | Loropetalum chinense            |
| Lusterleaf holly *      | llex latifolia                  |
| Oakleaf hydrangea       | Hydrangea quercifolia           |
| Perny holly *           | llex pernyi                     |
| Pfitzer juniper *       | Juniperus chinensis pfitzeriana |

<sup>\*</sup> denotes evergreen

Other species may be allowed with staff approval

List subject to change

| Common Name                    | Scientific Name                  |  |
|--------------------------------|----------------------------------|--|
| Roundleaf Japanese holly *     | llex crenata `rotundifolia'      |  |
| Sasanqua Camellia *            | Camellia sasanqua                |  |
| Witch-hazel                    | Hammamelis virginiana            |  |
| Yaupon holly *                 | Ilex vomitoria                   |  |
| Wax myrtle *                   | Myrica cerifera                  |  |
| Wild olive *                   | Osmanthus americana              |  |
| Chinese photinia *             | Photinia serrulata               |  |
| Mountain andromeda *           | Pieris floribunda                |  |
| Japanese andromeda *           | Pieris japonica                  |  |
| Pittosporum *                  | Pittosporum tobira               |  |
| English laurel *               | Prunus laurocerasus              |  |
| Podocarpus *                   | Podocarpus macrophyllus maki     |  |
| Narrow leafed English laurel * | Prunus laurocerasus angustifolia |  |
| Scarlet firethorn              | Pyracantha coccinea              |  |
| Yeddo-hawthorn *               | Raphiolepis umbellata            |  |
| Reeves spirea                  | Spirea cantoniensis              |  |
| Thunberg spirea                | Spirea thunbergii                |  |
| Bridalwreath spirea            | Spirea prunifolia plena          |  |
| Vanhoutte spirea               | Spirea vanhouttei                |  |
| Japanese yew *                 | Taxus cuspidata                  |  |
| Leatherleaf viburnum *         | Viburnum rhytidophyllum          |  |
| Laurestinus viburnum *         | Viburnum tinus                   |  |

7





Vegetation
Management
Keeping the lights on.

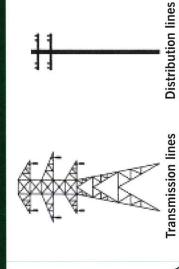
# Overview

Our customers want reliable power – in both good weather and bad. And while the trees that thrive throughout our 104,000 square miles of service area are a source of tremendous pride, they are also one of the main causes of power outages.

Duke Energy works consistently to balance aesthetics with our goal to provide safe, reliable power to the households and businesses that depend on us. It is our responsibility to ensure power lines are free of trees and other obstructions that could disrupt electric service. Trees that are close to power lines must be trimmed or cut down to ensure they don't cause power outages, and Duke Energy does much of this work proactively.

Our crews use a variety of methods to manage vegetation growth along distribution circuits and transmission power line rights of way, including vegetation pruning, felling (cutting down) and herbicides. These methods are based on widely accepted standards developed by the tree care industry and approved by the American National Standards Institute for tree care maintenance and operations.

# Examples of typical transmission and distribution structures



# Transmission rights of way

High-voltage transmission lines provide large amounts of electricity over long distances. The transmission lines in your community are part of the larger, interconnected grid system that powers an entire region, not just the community through which the lines run. Federal rules are more stringent for some transmission lines, depending on the voltage, and may include fines up to \$1 million per day for tree-related outages. Duke Energy manages its grid to provide reliable operation of transmission facilities while adhering to regulations and easement rights.

# Distribution rights of way

Distribution lines carry power from local substations to homes and businesses. A distribution right of way provides access to a strip of land so that utilities (electric, telephone, cable, water and/or gas) may build and maintain service lines. Duke Energy manages rights of way to provide reliable delivery of electricity.

# Vegetation management methods

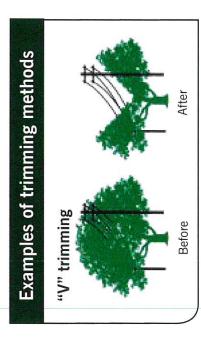
Duke Energy uses an Integrated Vegetation Management approach, which includes careful pruning, selective herbicidal application and tree felling. This allows us to evaluate power line areas and determine the best method for maintaining reliable service.

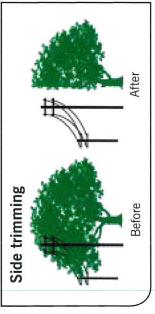
The objective of an Integrated Vegetation Management program is to maintain the lines – before the trees and brush are close enough to cause outages – in a manner that is consistent with good arboricultural practices.

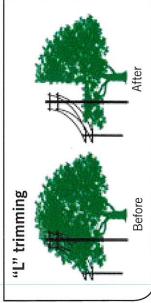
Duke Energy uses specific circuit information, reliability data and other indicators to prioritize lines for tree pruning and removal.

# Pruning methods

We do not "round" trees over because it's not good for a tree's health. We subscribe to directional or targeted pruning. These methods are endorsed by the tree care industry as the best pruning techniques for tree health.







Directional pruning involves cutting a limb back to another limb (or lateral) so that future growth of the resulting limb is directed away from the power lines. The basis for this type of pruning is that each limb removed from a tree is removed either where it joins another limb or at the trunk. With directional pruning, tree growth causes less impact to public safety and electrical service. This procedure is different from the philosophy of "rounding" trees over in which limbs are cut at arbitrary points, normally leaving unhealthy "stub" cuts, which can damage the tree.

# Pruning vs. cutting down

Each tree is different and must be considered individually. Trees with trunks close to the power lines may require much more pruning than trees located farther from the line. Additionally, not all pruning techniques are appropriate for all tree species.

When pruning, our trimming professionals make every attempt to trim for sufficient clearance until we return on our next planned maintenance.

Before deciding to remove a tree, we first evaluate its health and proximity to the lines. A tree may have a decayed portion on the trunk. The entire tree may be dead or in the process of dying, which might cause it to break or fall. It may have soil that is severely eroded away from the root system, making it more likely to fall.

Sometimes trees are required to be cut down when they are too close to power lines or when they would have to be pruned severely.

# Herbicide applications

Duke Energy uses environmentally responsible herbicide applications to control tall growing incompatible plants within power line rights of way. Our objective is to maintain low growing vegetation to minimize potential electric power interruptions, which also enhances wildlife habitat.

We use professional contractors to apply herbicide by utilizing different methods including foliar, stump, stem and vine applications.

Duke Energy contractors have been trained on the proper, safe and environmentally responsible techniques of managing plant growth. All products used by Duke Energy are registered by the Environmental



Protection Agency and approved by appropriate state agencies.

# Debris removal

The majority of Duke Energy's pruning and cutting occurs during planned maintenance. We typically dispose of any small limbs and brush in landscaped settings. The larger pieces of wood are cut into manageable lengths for the property owner's use. In non-landscaped sites, pruned vegetation and wood debris are left in place to bio-degrade. When an "Act of God" (e.g., lightning, ice storms, high winds, hurricanes, tornadoes) causes trees or other vegetation to fall across power lines and thus create power outages, we cut the trees and brush so poles and lines can be repaired and re-energized. Disposal of any wood, limbs or debris resulting from this type of emergency operation is the property

For more information visit duke-energy.com/ safety/right-of-way-management.asp.

Visit the Arbor Day Foundation at arborday.org/treelineusa for information about planning and planting vegetation around electrical facilities.